

### **REMARKS/ARGUMENTS**

In the Office Action dated June 1, 2006, the Examiner rejected claims 1-9 and 16-48 under 35 U.S.C. § 103(a) as being unpatentable over Stanley (U.S. Patent No. 4,844,924). Claim 4 has been canceled. Claim 5, which originally depended from claim 4, has been amended to depend from claim 1. It is respectfully submitted that none of the prior art, either taken singly or in combination, discloses or suggests the present invention as set forth in the present claims.

The present invention is directed to bran having a reduced ferulic acid concentration and an elevated vanillin concentration, as well as a method of producing the same utilizing a mild ozone oxidation treatment. Stanley is concerned with a method of decreasing the color of dietary fiber material by reacting the material with an esterifying agent and then bleaching the fiber material. Stanley notes that typical bleaching agents can be utilized, such as peroxides, chlorites, peracids and ozone. However, the Examiner clearly acknowledges that Stanley does not disclose numerous claimed features of the present invention, including the amount of ozone utilized. Furthermore, nowhere in the prior art is there a teaching or suggestion to utilize a mild ozone oxidation treatment to reduce ferulic acid in bran.

A reference that performs a step of a claimed process for a different purpose and does not recognize the problem solved in the Applicant's process does not render the process obvious. *Ex parte Wisdom et al.*, 184 USPQ 822 (POBA 1973). In the *Ex parte Wisdom* decision, the Board of Patent Appeals and Interferences found that a reference teaching fermenting a dough containing potatoes did not render obvious a process wherein yeast was added to a dough in an amount sufficient to ferment and reduce sugars, stating that the reference "ferments for an entirely different purpose than the lowering of reducing sugar content and does not recognize the problem solved by appellants." *Id.* at 823. In the present invention, ozone is utilized at a ratio of about 0.1 to 1 parts of ozone per 100 parts of bran. This ratio is important to the invention and, as clearly stated in the subject application, balances the desired reduction of ferulic acid with the undesirable

destruction of vanillin. See page 15, lines 5-6 of the subject application. The desirability of a mild ozone oxidation treatment is clearly not addressed in any of the prior art cited by the Examiner. Instead, the Examiner simply states that it would have been obvious to determine the amount of ozone to be used through routine experimentation depending on the degree of **bleaching** desired and the amount of time at which **bleaching** is carried out. See page 3 of the Office Action. However, there is a significant difference between one of ordinary skill in the art experimenting with the amount of ozone desired for bleaching and the present invention. Again, the current invention utilizes mild ozone oxidation to balance the desired reduction of ferulic acid with the undesirable destruction of vanillin. Changes have been made to claims 1 and 10 to more particularly point out this novel aspect of the invention. The fact that different amounts of ozone can be utilized in a process for an entirely different purpose, i.e., bleaching, does not render the process of the current invention obvious.

The Examiner goes on to state that the Applicant has not shown anything unexpected with the amount of ferulic acid claimed and states on page 5 of the Office Action that it would have been obvious to one skilled in the art to vary the variable (ferulic acid) depending on the flavor wanted in the bran and the degree of **bleaching** wanted in the bran. The Examiner is using impermissible hindsight in making this assertion. Nowhere in the prior art is the flavor of bran discussed with reference to ozone bleaching and the amount of ferulic acid and vanillin desired. A proper rejection under 35 U.S.C. § 103 cannot be based on hindsight knowledge of the invention under consideration for the sole basis of attempting to meet the recitation of the claims. Specifically, the CAFC in *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 218 USPQ 865, 870 (1983) stated:

*All the pieces of the present invention were known in the art, ...That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is, however, simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. A court must*

*consider what the prior art as a whole would have suggested to one skilled in the art (Case citations).*

The Examiner further states that the specification discusses a starting bran characterized by a native concentration of ferulic acid that ranges from about 20-40 ppm. The Applicant fails to understand why this should make the claim obvious. The fact that ferulic acid levels in bran are naturally variable does not render the present invention obvious. Claims 1 and 10 clearly state that bran is produced “having a **reduced ferulic acid finished concentration...[and] an elevated finished concentration of vanillin.**” Similarly, claim 41 claims a product “having a ferulic acid concentration of less than 30ppm and an **elevated concentration of vanillin.**” The claimed process reduces ferulic acid content in bran, producing a product having reduced ferulic acid concentrations and elevated vanillin levels. Nowhere in the prior art is there a teaching or suggestion to utilize mild ozone oxidation to reduce ferulic acid concentrations while raising the vanillin concentration in bran.

Additionally, the Examiner argues that the Applicant has not shown any unexpected result or criticality with the amount claimed. The Applicant respectfully submits that unexpected results and criticality are not needed when the process claimed is utilized to solve an entirely different problem from the one addressed by the prior art. Here, a mild ozone oxidation process is utilized to reduce ferulic acid levels in bran to improve the taste. In contrast, Stanley deals with reducing the color of bran utilizing an esterifying agent followed by an oxidative bleach. Even if the critical nature of a component is necessary for patentability, the critical nature of a difference or of a limitation need not necessarily be pointed out in the specification, and it need not be expressly stated to be critical. See *Jennings v. Brenner*, 255 F.Supp. 410 (DCDC 1966). Regardless, the Applicant clearly sets forth the importance of the ozone range claimed in the subject application. See, for example, page 12, line 23 through page 15, line 6, discussing the chemistry of the oxidation process and setting forth the amount of ozone needed for the desired balance of ferulic acid and vanillin levels. As stated in the specification, insufficient ozone can result in higher levels of ferulic acid remaining in the

treated bran, while excessive ozone will drive the oxygenation process so far that desirable vanillin is destroyed. See pages 14 and 15 of the Application.

Finally, the Examiner rejected claims 1-3, 6-21, 23, 24, 25, 26, 33, 34, 36-39 under 35 U.S.C. § 102(e) as being anticipated by General Mills Publication WO 02/21936. Like the Stanley reference, the '936 publication is concerned with the bleaching of bran and does not teach nor suggest utilizing a mild oxidation treatment to reduce ferulic acid in bran. For at least corresponding reasons to those outlined above with respect to Stanley, the '936 publication does not anticipate any of the pending claims. In general, it is simply irrelevant that ozone is employed in the invention disclosed in the WO publication, as the publication does not at all address treating bran with a specified level of ozone to reduce a ferulic acid concentration while assuring an elevated concentration of vanillin.

The Applicant submits that the present method for solving the problem of ferulic acid content in bran is novel and unobvious, as is the product produced thereby. Based on the amendments to the claims and the above remarks, withdrawal of the rejections made, allowance of the claims and passage of the application to issue are respectfully requested. If the Examiner should have any additional concerns regarding the allowance of this application, the Examiner is cordially invited to contact the undersigned at the number provided below to further expedite the prosecution of the application.

Respectfully submitted,



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